Callan

February 8, 2023

**Minnesota's
School Trust Lands**

Asset
Management Plan:
Phase One

School Trust Lands
**School Trust
Severed Minerals**

Table of Contents

Executive Summary

The first-ever Asset Management Plan for Minnesota's school trust lands will serve as a 25-year framework for school trust lands management, as required by state law. [1] It is designed to inform trustees, trust beneficiaries, public officials, stakeholders, and the general public about the high-level policy direction and management of the Permanent School Fund's real property assets. The plan contains critical information about school trust lands, including:

- Their history and current land base;
- The Permanent School Fund (PSF) and its governance structure;
- Trustees' fiduciary duties, statutory management goals, and legal requirements;
- Current management direction; and
- Revenue, expense and management cost information as it is currently available.

Callan was not able to comprehensively evaluate the financial position and the profitability of school trust lands because complete revenue, expense, and management cost information in total and for the three primary asset classes in the portfolio does not currently exist. This is critical and fundamental information that forms the foundation for prudent management. Without it, Callan could not determine the most efficient mix of asset classes or establish a full suite of performance objectives, including risk and return measures.

Phase One of this plan describes a classification system of seven asset classes and recommends establishing a three-tiered ranking system to provide direction for effective asset management. It also provides an estimate of the current value of school trust lands and proposes potential performance measurement tools to monitor the returns on the lands. These tools will provide benchmarks for evaluating the future success of overall as well as specific activities from both a financial and natural resource management perspective.

Phase One also includes a situational analysis that outlines strengths and opportunities as well as constraints, challenges and risks. Recognizing these helps to identify key internal and external factors and their positive or negative effects on school trust lands and their management.

Finally, Phase One concludes with recommendations designed to help the Minnesota Office of School Trust Lands (OSTL) and the Minnesota Department of Natural Resources (DNR) discharge their legal obligations and fiduciary duties and achieve their statutory management goals and legal requirements. These recommendations address the information gaps described above as well as focus on other activities designed to improve efficiencies, better position the assets for increased long-term revenue generation and provide additional guidance and direction. Phase Two of the plan will address Callan's recommendations so OSTL and DNR can successfully complete and DNR can implement the asset management plan.

Callan LLC

OSTL, in conjunction with DNR, selected Callan for this project through a competitive Request for Proposals (RFP) process. Callan is one of the largest independently owned investment consulting firms in the United States, advising on more than $3 trillion in assets. Callan has been providing real property consulting for three decades, providing customized services including developing portfolio management plans, performance reporting procedures, and other processes to guide fiduciaries. Callan has extensive experience working with states possessing sizeable trust land portfolios.

---

[1] Minn. Stat. sec. 127A.353 subd. 4(a)(6). The Office of School Trust Lands, in conjunction with the Department of Natural Resources, must develop a ten-year strategic plan and a 25-year framework for management of school trust lands.

Project Team

An interagency team of OSTL and DNR leadership and staff worked in tandem with Callan to develop this asset management plan. The OSTL-DNR Project Team ("Project Team") met at least biweekly throughout the development of the plan to provide input, data and direction to ensure that Callan's efforts recognized previous work, current policies and potential future opportunities. The team also coordinated information gathering from a DNR team of subject matter experts, organized the review process for multiple drafts of the report, and regularly solicited input from DNR's School Trust Advisory Team.

Process

Callan's process for developing the asset management plan included:

- Collecting and analyzing qualitative and quantitative information provided by OSTL and DNR.
- Compiling and reviewing information from other state land trusts and asset managers.
- Conducting independent research and analysis.
- Holding a project kickoff meeting with the Project Team and the DNR Commissioner's Office.
- Interviewing division directors from DNR divisions of Lands and Minerals, Forestry, Fish & Wildlife, Parks & Trails, and Ecological & Water Resources along with key legislators and stakeholders.

Callan's Real Assets Consulting Team and Alternatives Review Committee peer-reviewed an earlier draft of the plan and provided it to the Project Team, who distributed it to internal DNR teams for review. Subsequent activities included:

- Meeting with representatives of the five aforementioned DNR divisions to discuss their written feedback and concerns.
- Conducting comprehensive review sessions and addressing feedback from DNR leadership and staff along with information provided by the Project Team.
- Engaging with Minnesota's Tribal nations to gain their perspective, understand their priority issues and address their feedback.
- Engaging with OSTL and DNR school trust land stakeholders (including government agencies; beneficiary, conservation, and outdoor recreation organizations; and forestry and minerals industry representatives) and addressing their feedback.

This work builds on several important, previously conducted studies and reports including:

- Minnesota Department of Natural Resources, *"Minnesota's School Trust Lands FY18-19 Biennial Report,"* July 2020.
- State of Minnesota, Office of the Legislative Auditor, "*School Trust Land Management and Oversight, Special Review*," May 2020.
- Minnesota Management and Budget, Management Analysis and Development, "*School Trust Lands Funds and Accounts*," October 2018.
- Minnesota Management and Budget, Management Analysis and Development, "*Costs for School Trust Lands Management: Current Approaches, Issues, and Potential Alternatives*," October 2018.

Callan

- Minnesota Department of Natural Resources, Operation Services Division, Internal Audit Section, *"Internal Audit Closure Report School Trust Fund Risk Assessment,"* April 2014. https://mn.gov/school-trust-lands/assets/Closure Letter - School Trust Fund Risk Assessment 2014.04.25_tcm1107-563425.pdf
- Minnesota Department of Natural Resources, *"Minnesota's School Trust Lands Biennial Report Fiscal Years 2012–2013.*

These reports provided critical insight into the history and key considerations of school trust lands management in Minnesota. Some of the issues identified in these prior reports are the same—or similar to—issues identified through the development of this plan, and those key findings are described in the plan. This project differs from previous studies in that it incorporates critical issues into an asset management plan from the perspective of a professional advisor to fiduciaries whose purpose is to assist their clients in discharging their duties and obligations with the highest standards. Additionally, the recommendations found at the end of this plan incorporate best management practices from peer land trust managers as well as Callan's decades of experience working with and advising other fiduciaries.

Background

Purpose

Organizations develop asset management plans to set forth their long-term vision, operating philosophy, and strategic direction. Many kinds of businesses and organizations in both the private and public sector use them to identify their physical assets, classify them into like groups, and direct the growth of those assets. They are also used to guide where to allocate resources (both personnel and capital) to effectively manage the assets to meet goals and objectives and identify and mitigate any risks that could decrease their value over time. States with significant trust land holdings are increasingly utilizing asset management plans to guide their activities and direct the management of their trust assets.

The primary purpose of this asset management plan is to create a 25-year framework for management of Minnesota's school trust lands. It is designed to achieve the best and most efficient mix of revenue-generating opportunities using sound natural resource conservation and management principles. The goals of the 25-year framework, as defined in Minn. Stat. sec. 127a.353 are:

(i) Retain core real estate assets.
(ii) Increase the value of the real estate assets and the cash flow from those assets.
(iii) Rebalance the portfolio in assets with high performance potential and the strategic disposal of selected assets.
(iv) Establish priorities for management actions.
(v) Balance revenue enhancement and resource stewardship.
(vi) Advance strategies on school trust lands to capitalize on ecosystem services markets.

Scope

The Minnesota Constitution established the Permanent School Fund (PSF) to ensure a long-term source of funds for public education in the state. It has two types of assets: real property assets granted to the state by the federal government, and financial assets (e.g. cash and investment in stocks, bonds and other securities). DNR manages the real property assets (the school trust lands), and transfers revenues and receipts generated from activities on those lands, less expenses and costs allowed under state law, into the PSF. Minnesota Management and Budget (MMB) manages the financial assets, and the State Board of Investment (SBI) invests those assets. The financial assets include the accumulated deposits to the fund from DNR's management activities including mineral leasing and royalty payments, forest management activities, various real estate activities and land sales, as well as all other cash and investments credited to the PSF.

The scope of this asset management plan focuses exclusively on the real property assets managed by DNR and the revenues generated from DNR's management activities. It does not provide discussion or analysis of the financial assets managed by MMB and invested by SBI.

History

School trust lands are an important and broadly misunderstood category of land ownership across the nation. They are publicly owned and managed yet have a different legal purpose than other public lands. Just as state parks, wildlife management areas or other types of public land have legally defined objectives, so do school trust lands. They were established in multiple state constitutions to be held in trust for a single and specific purpose: to generate revenue for public schools.

Legislation adopted by the Continental Congress in 1785 established a framework under which states and territories reserved lands to help pay for public schools.[2] When Minnesota became a State in 1858, the federal government granted sections 16 and 36 of every township, or their equivalent, to the state "for the use of schools".[3] Congress later granted additional lands, entrusting Minnesota with a total of 8.1 million acres. All three federal grants are now considered school trust lands in the Minnesota Constitution.[4]

Table 1. Federal School Trust Land Grants to Minnesota

Federal Land Grants	Original Acres Conveyed	Acres Today
School & Indemnity	2,900,000	966,705
Swamp Act	4,706,503	1,540,347
Internal Improvement	500,000	6,510
Total	8,106,503	2,513,562

In the late 1800s, state policy promoted selling these lands to private owners as quickly as possible. By 1900, the state sold much of the land—especially agricultural land in the southern part of the state—to private interests. In the early 1900s, state policy began to shift toward acknowledgment that public ownership and management of school trust lands were in the best long-term interest of generating revenue for public schools, and the Minnesota Legislature modified its school trust lands management policy by placing a number of restrictions on how the state would manage its remaining school trust acreage. Since the turn of the 20th century, the state has managed school trust lands under the policy of "selective retention" of lands, with various laws requiring reserving them for their future economic potential, and to retain them in public ownership.[5]

Since 1861, several state entities have managed Minnesota's school trust lands, including the State Board of Commissioners of School Lands (1861), the State Land Office (1862-1931), and the Department of Conservation (1931-1969). In 1969, the Legislature reorganized the Department of Conservation into the Department of Natural Resources, where management of school trust lands remains today.

Shared Geography

The State of Minnesota shares geography with eleven Tribal Nations — four Dakota communities in the southern portion of the state and seven Ojibwe communities in the north. The name Minnesota comes from the Daḳota name for this region,

---

[2] Journal of Continental Congress, vol. 28, pg.375. March 20, 1785.
[3] 11 U. S. Statutes at Large, 166-67; 34 Congress, II sess., ch..60.
[4] Minnesota Constitution, Article 11, sec. 8.
[5] State of Minnesota, Office of Legislative Auditor, *Evaluation of State Land Acquisition and Disposal* (1983).

Mni Sota Maḳoce — "the land where the waters reflect the clouds." The Daḳota and Ojibwe, whose cultural, spiritual, and economic practices are intrinsically woven to this landscape, hold this land sacred. From 1837-67, the Ojibwe and Dakota people negotiated government to government with the United States and, through a series of treaties, ceded most of the land that is now Minnesota to the federal government while preserving their sovereign land, rights, and privileges.[6]

Land Base

Today, Minnesota's school trust lands comprise approximately 2.5 million acres, or 45%, of the 5.6 million acres of public land managed by DNR. Additionally, DNR manages one million acres of school trust lands severed mineral interests. The lands include forestlands, large deposits of developed and undeveloped minerals, riparian lands, construction aggregate, grasslands, farmlands used for grazing and crop production, and a significant quantity of wetlands that are currently economically unproductive because they are low-lying and inaccessible and therefore have little or no marketability.

More than two million acres, or 92%, of Minnesota's school trust lands are located in ten northern Minnesota counties. As indicated in Table 2 below, school trust lands are a substantial share of the total land base in a number of these counties. The remaining school trust lands are dispersed through other parts of the state, with less than 500 acres remaining in the southern third of the state. The distribution and acreage of school trust lands across counties is shown in Figure 1 and Table 2 below, along with the county assessed value of school trust lands in each county. There is not a direct correlation between total number of acres and value, as the per-acre value by county varies dramatically depending on numerous factors such as land characteristics and location.

Table 2. Geographic distribution of school trust lands by county

County	Acres of School Trust Lands	School Trust Acres as Percent of County Land Base	County Assessed Value of School Trust Acres
Aitkin	134,643	10.5%	$128,624,700
Beltrami	60,777	3.1%	$80,503,900
Cass	150,900	9.7%	$290,074,900
Cook	121,765	11.8%	$219,983,900
Hubbard	29,343	4.6%	$54,615,500
Itasca	293,630	15.7%	$265,551,000
Koochiching	854,627	42.4%	$149,559,725
Lake	159,290	10.8%	$216,060,400
Roseau	45,928	4.3%	$34,367,500
St. Louis	474,868	11%	$362,517,800
Remaining 46 counties	187,791	N/A	$257,214,215
Total	2,513,562	N/A	$2,059,073,540

---

[6] *See generally* www.treatiesmatter.org/treaties

Figure 1. Location of school trust lands and school trust severed minerals
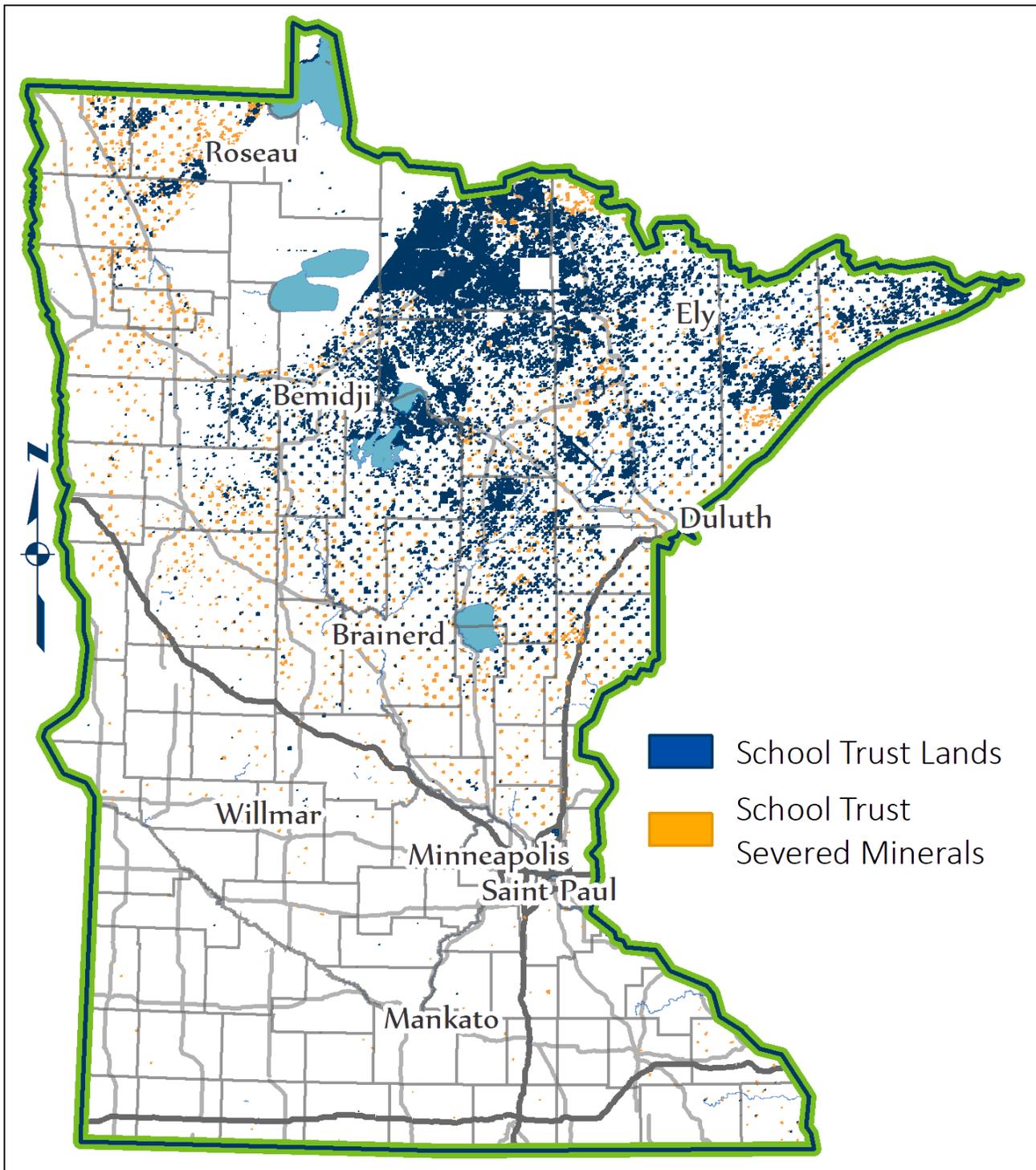
Ceded Territories and Tribal Reservations

All 2.5 million acres of Minnesota school trust lands are located within ceded territories with a small subset situated within tribal reservations boundaries. Figure 2 depicts the intersection of school trust lands within tribal reservations and Table 3 specifies the acreages of school trust lands within each reservation boundary. As detailed below, DNR manages all school trust lands, including those within tribal boundaries, to secure the maximum long-term economic return using sound natural

resource conservation and management principles and through other state law. DNR consults with Minnesota tribal governments in the management of school trust lands within tribal reservations and, where there are issues of tribal interest, on school trust lands within ceded territories.

Figure 2. Location of school trust lands within tribal reservation boundaries
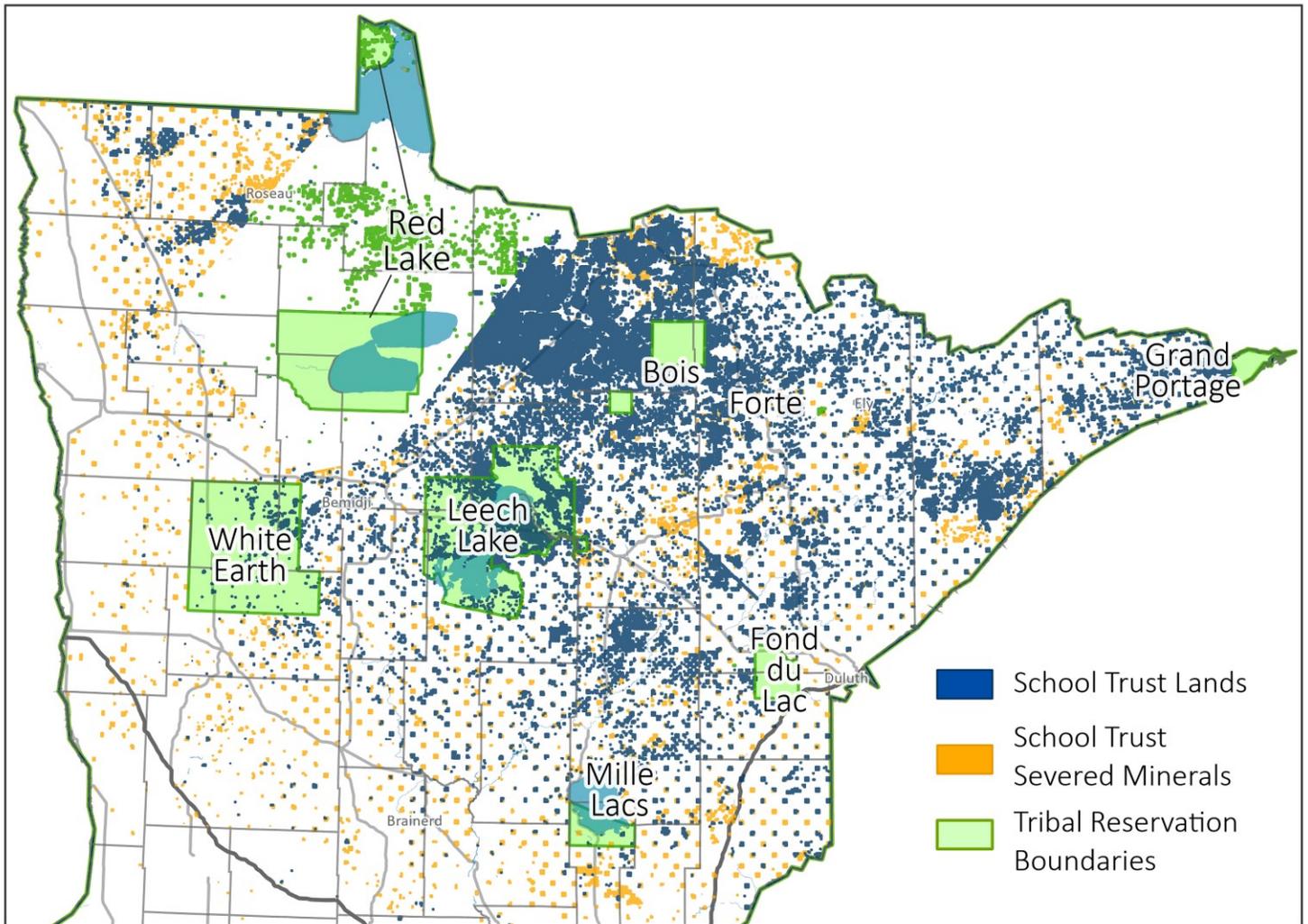
Table 3. School trust land acreages within tribal reservations

Tribal Reservation	Acres of School Trust Lands	Acres of Additional Severed Minerals	Total Acres
Leech Lake Band of Ojibwe	142,274	7,174	149,448
White Earth Band of Ojibwe	16,975	10,144	26,939
Mille Lacs Band of Ojibwe	992	1,764	2,756
Fond du Lac Band of Ojibwe	240	0	240
Red Lake Band of Ojibwe	133	4	137
Grand Portage Band of Ojibwe	55	71	126

Callan

Governance

Minnesota uses an "internal management" model for school trust lands management. The state assigned management of the lands to DNR[7] and management of the financial assets to MMB.[8] This means that the state manages its own real property and financial portfolios, rather than outsourcing this work to external management entities. Several other state government bodies participate in the management or oversight of school trust lands and the revenue they generate.

Government bodies that participate in management of the **real property assets** include:

- The Department of Natural Resources (DNR) manages the state's school trust lands to secure maximum long-term economic returns using sound natural resource conservation and management principles. It also advises the Legislative Permanent School Fund Commission (LPSFC) and Governor on school trust land management issues, and coordinates with the Office of School Trust Lands (OSTL) on strategies designed to strengthen the Permanent School Fund's real property portfolio and position it for long-term revenue generation. DNR has specific management goals and legal obligations when managing school trust lands. However, DNR does not manage non-trust assets for the benefit of the Permanent School Fund.

- The Office of School Trust Lands (OSTL) advises the Governor, Executive Council, LPSFC and DNR on decisions, policies and approaches relating to school trust lands management. OSTL is required by law to develop long-range comprehensive strategic plans to ensure efficient management of the Permanent School Fund's real property assets and propose legislative initiatives to secure the maximum long-term revenue from those assets to the LPSFC and the Executive Branch.

- The Legislative Permanent School Fund Commission (LPSFC) advises DNR and OSTL on the management of school trust lands. The commission is required to review statutes and recommend any changes necessary for "provident utilization" of school trust lands and to report annually to the Legislature with recommendations to secure long-term economic return for the Permanent School Fund.

- The Executive Council makes final approval decisions on various timber management, iron ore, nonferrous metallic mineral and certain other long-term leases. The Executive Council is comprised of the Governor, Lieutenant Governor, Secretary of State, State Auditor and Attorney General.

- The Land Exchange Board makes final approval decisions on the exchange of public lands of the state for other public or private lands. The members of the Land Exchange Board are the Governor, the Attorney General and the State Auditor.

Government bodies that participate in management of the **financial assets** include:

- Minnesota Management and Budget (MMB) manages the Permanent School Fund's financial assets. MMB deposits and transfers revenues to and from the Permanent School Fund.

- The State Board of Investment (SBI) invests the Permanent School Fund's financial assets. The total value of the assets along with their performance determines how much revenue from the Permanent School Fund is available for the state's school districts and charter schools.

- The Department of Education (MDE) distributes funds to the state's public school districts and charter schools in semi-annual payments. MDE allocates these payments based on "the number of pupils in average daily membership during the preceding year."

---

[7] Minn. Stat. sec. 84.027, subd. 18.
[8] Minn. Stat. sec. 11A.16, subd. 3.

Fiduciary Duties

In its simplest form, a trust is a legal relationship in which one party holds property for the benefit of another. There are three participants in every trust relationship: a "settlor", who establishes the trust and provides the property to be held in trust; a "trustee", who is charged by the settlor with the responsibility of managing the trust in keeping with the settlor's instructions; and a "beneficiary", who receives the benefits from the property held in trust.

The Permanent School Fund was established with passage of the Minnesota Enabling Act and adoption of Minnesota's Constitution. These actions, along with the state's acceptance of the federal land grants, created a relationship that encompasses the essential elements of a trust. The federal government, as the "settlor", granted lands in "trust" to the state to support public education in perpetuity. As "trustee", the state must manage school trust financial and land assets "consistent with the best interests of trust beneficiaries" pursuant to the Minnesota Constitution and state law. Within the governance structure described above, state entities hold different trustee responsibilities based on their respective expertise and statutory authority. Minnesota's school trust "beneficiaries" are the current and future public school districts in the K-12 public education system.

Trustees owe what are known as "fiduciary duties" to the trust beneficiaries.[9] Trusteeship is a legal responsibility, and fiduciary duties are owed by all trustees by reason of their trustee status. Any person acting in an official state capacity who makes school trust-related decisions or recommendations is a trustee. Trustees are subject to the obligations articulated in the Minnesota Constitution and state law, with the fiduciary duty to ensure that both current and future beneficiaries receive maximum economic returns from school trust assets.

Statutory Management Goals and Legal Requirements

Statutory Goals

The statutory goal for Minnesota's Permanent School Fund is to secure the maximum long-term economic return from the school trust lands consistent with the fiduciary responsibilities imposed by the trust relationship established in the Minnesota Constitution, with sound natural resource conservation and management principles, and with other specific policy provided in state law.[10]

As noted above, Minnesota law vests school trust lands management with DNR, and managing these lands come with specific legal and fiduciary obligations. As part of the many statutory responsibilities DNR holds as the state's natural resources management agency, state law sets forth a number of specific goals and requirements for DNR to fulfill its fiduciary duties to current and future school trust beneficiaries. These goals and requirements guide DNR's management decisions on school trust lands. They also inform the strategic advice OSTL provides to the Governor, the Legislative Permanent School Fund Commission and DNR.

By law, DNR has the authority and responsibility to manage school trust lands and must report to the Legislature biennially on how it has and will continue to achieve the following management goals:[11]

- Manage the school trust lands efficiently and in a manner that reflects the undivided loyalty to the beneficiaries consistent with DNR's fiduciary duties.

---

[9] A fiduciary is someone that acts on behalf of another person or group of people to manage their assets. When a party accepts the fiduciary duty on behalf of another party, they are generally required to act with the care, skill, prudence, and diligence that a prudent person acting in like capacity and familiar with such matters would use. All fiduciaries are charged with a series of duties legally owed to the beneficiaries of the trust. These duties imply a requirement to monitor and assess trust management over time.

[10] Minn. Stat. sec. 127A.31.

[11] Minn. Stat. sec. 84.027, subd. 18(a).

- Reduce the management expenditures of school trust lands and maximize the revenues deposited in the Permanent School Fund.

- Manage the sale, exchange, and commercial leasing of school trust lands, requiring returns of not less than fair market value, to maximize the revenues deposited in the Permanent School Fund and retain the value from the long-term appreciation of the school trust lands.

- Manage the school trust lands to maximize the long-term economic return for the Permanent School Fund while maintaining sound natural resource conservation and management principles.

- Optimize school trust land revenues and maximize the value of the trust consistent with balancing short-term and long-term interests, so that long-term benefits are not lost in an effort to maximize short-term gains.

- Maintain the integrity of the trust and prevent the misapplication of its land and its revenues.

Legal Requirements

In addition to the management goals above, DNR has a number of school trust land-related requirements set forth in state law. A non-exhaustive list of these requirements include:

- DNR manages school trust mineral resources, including negotiating and drafting of leases, conducting mineral lease sales, monitoring and verifying minerals removed from school trust lands, and evaluating mineral potential for proposes land transactions.[12]

- DNR manages school trust forest resources, including planning timber harvest activities, conducting timber sales, verifying forest products removed from school trust land, collecting revenue, reforesting areas that have been harvested, maintaining access roads, protecting the forest resource through activities such as fire suppression, and certifying its forest management costs annually.[13]

- DNR must hold sales of school trust lands if doing so is best for the public interest.[14] DNR can only sell 100,000 acres of school trust lands in any one year.[15] When DNR decides to sell school trust lands, it must first determine the estimated market value. Appraisals are required for proposed school trust sale parcels with an estimated market value in excess of $100,000.[16]

- DNR must give precedence to the long-term economic return in managing school trust lands if it finds an irresolvable conflict between maximizing the long-term economic return to the Permanent School Fund and protecting natural resources and recreational values on school trust lands.[17]

- DNR must compensate the Permanent School Fund before restricting the ability of school trust lands to generate revenue when it determines that management practices applied or prohibited by a policy or designation will diminish revenues generated from school trust lands.[18]

---

[12] *See generally* Minn. Stat. sec. 92 and sec. 93.
[13] *See generally* Minn. Stat. sec. 90.
[14] Minn. Stat. sec. 92.12, subd. 4.
[15] Minn. Stat. sec. 92.03, subd. 1.
[16] Minn Stat. sec. 92.115, subd. 1.
[17] Minn. Stat. sec. 84.027, subd. 18(b).
[18] Minn. Stat. sec. 92.122.

Management Direction

State law requires DNR and OSTL to routinely evaluate the extent to which they are meeting their respective school trust lands-related fiduciary duties and statutory obligations. DNR, as school trust lands manager, uses a variety of policies, processes, and procedures to direct its management of school trust lands and address these obligations.

Chief among these is DNR's Management of School Trust Lands policy and its related procedures. It was originally issued in 2012, then substantially revised and reissued in 2019. The policy: (1) describes the legal directive guiding school trust lands management; (2) defines sound natural resource conservation and management principles; (3) authorizes the use of guidelines to provide field-level management direction; (4) clarifies department-level decision-making for school trust lands; (5) provides an interdisciplinary dispute resolution process; and (6) identifies how the department compensates the Permanent School Fund when management activities reduce revenue or when policy or designation prohibits revenue.

DNR issues management guidelines when clarifying guidance is needed to ensure consistent natural resource management that meets the intent of the statutory goal of the Permanent School Fund. These guidelines are typically organized by asset class (e.g. minerals, forestlands, real estate, etc.) and may direct management at the site or landscape level. DNR develops these guidelines for the following purposes:

- To provide field-level operational guidance to clarify implementation of state and federal law.

- To define approved best management practices that meet "sound natural resource conservation and management principles" to apply on school trust lands.

- To identify specific circumstances when it is appropriate to take ecological benefits of school trust lands into consideration because doing so is in the best interests of the trust. These circumstances fall into three general categories:

  o *When candidate species under the federal Endangered Species Act, or state species of special concern found on school trust lands are at high risk of being federally or state listed as threatened or endangered.* The uplisting of federal candidate species or state special concern species to threatened and endangered status typically has a greater negative impact on DNR's ability to generate revenue on school trust lands than proactively managing to prevent the uplisting of those species. As a result, DNR uses policy guidelines to identify when to use non-standard management practices to prevent uplistings, even when it impacts revenue generation.

  o *When resource management plans or activities on school trust lands need to be modified to participate in natural resource certifications.* Some resource certifications are needed to maintain access to certain markets, even though the participation in such a certification may, at first glance, reduce revenue to the Permanent School Fund. For example, DNR participates in forest certification,[19] which reduces revenues deposited into the Permanent School Fund by $25,000–$421,000 annually (or 0.1%–1.7% of 2019 revenues), according to the 2016 Minnesota Management and Budget, Management Analysis and Development *Impact of Forest Certification on Costs, Revenues, and Market Access for School Trust Lands* report. However, that report states that customers require forest certification as a condition of purchasing timber from school trust lands. In such cases, DNR relies on policy guidelines to identify and implement practices that ensure it maintains these certifications, while also meeting its school trust land-related statutory obligations.

---

[19] Forest certification is a voluntary third-party process that identifies and recognizes well-managed forestland. It takes into consideration the ecological, economic, and social components of forests and surrounding communities.

- In other circumstances, on a limited basis, as determined by the DNR Commissioner.
- To identify landscape-level management approaches for use on school trust lands.

The use of guidelines as a management tool for school trust lands is a new component of the 2019 revision to DNR's Management of School Trust Lands policy. As such, development of specific guidelines is an ongoing process.

Revenues and Expenses

A comprehensive understanding of revenues, expenses and management costs forms the foundation for prudent management of the school trust lands portfolio. Such an understanding sets the stage for informed development of management plans and prioritized management efforts (either of time or money) such as forecasting expected net revenues from proposed activities or identifying which lands to retain and which to consider for divestment. It also helps trustees determine whether they are meeting their fiduciary obligations and achieving their management goals, such as "managing school trust lands efficiently" and "reducing school trust land management expenditures." Finally, it is critical for the reporting of accurate and credible financial information to trust beneficiaries, the Legislative Permanent School Fund Commission and stakeholders.

Minnesota statutes dictate how DNR allocates revenues and expenditures to the Permanent School Fund. DNR's financial reporting is oriented towards meeting those statutory requirements, with less focus on comprehensive tracking or reporting of school trust land financial information. As a result, DNR does not currently know the complete financial position of the school trust lands portfolio, and it is unclear whether or to what degree school trust lands are profitable. In part, this is due to (i) state laws that restrict the type of expenses that can be paid for with school trust revenues (ii) the statutorily required commingling of school trust lands funds with other monies managed by DNR to pay for school trust land-related management costs,[20] and (iii) limitations to the state's and DNR's accounting systems and reporting processes.

To analyze and assess financial performance including profit or loss, performance changes over time, volatility, and to use as inputs in portfolio modeling, Callan requested historical (at least ten years) and projected revenue, expense,[21] and management cost[22] information for school trust lands in total and disaggregated by the three primary revenue-generating asset classes currently in the portfolio (minerals, forestry, and real estate).

Revenues

DNR generates revenue on school trust lands from three major categories—mineral lease rental and royalty payments, forest management and surface activities, and real estate transactions. DNR provided ten years of historical gross revenue data for the three primary asset classes of the portfolio, as indicated in Figure 2 below. DNR provided projected revenue information for the next two biennia in the format developed by Minnesota Management and Budget.[23]

---

[20] *See* Minn Stat. sec. 16A.125 subd. 5(b), sec. 84.415 subd. 5(b), sec. 84.63 subd. b(1)(e), sec. 92.50 subd. 1(a)(4), sec. 93.22 subd. 1(b).

[21] Expenses refer to expenses associated with performing an activity at the property/parcel level, whether done internally or by a third party. These would include costs of maintenance, engineering, taxes, travel, fuel, property management including personnel salaries and benefits, advertising, marketing, leasing, utilities, insurance, legal, entitlements, research studies, third party fees, appraisals, feasibility studies, inspections, regulatory fees, and accounting. Expenses also refer to some portfolio-level items such as portfolio-level accounting or research studies/investigations covering a sector.

[22] Management costs generally refer to overhead that benefits the entire portfolio and are difficult to allocate on a property/parcel basis. These may include the costs of office facilities, technology, and salaries of people not directly involved in managing the assets on a day-to-day basis (for example, senior DNR personnel). Note that these are not all-inclusive lists.

[23] https://mn.gov/mmb/budget/current-budget/current/

Figure 3. Gross revenue by asset class
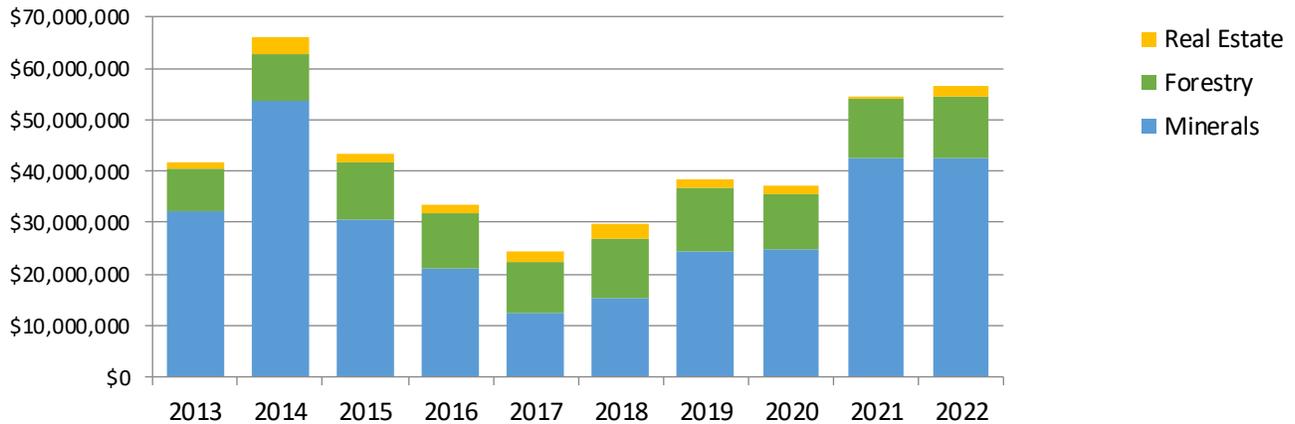
Various factors affect the amount of gross revenue generated from school trust lands year to year. For example, economic returns can vary significantly based on global and regional market-driven price fluctuations for minerals and timber.

- **Minerals:** From 2013-2022, approximately 70% of annual gross revenue generated from school trust lands was from minerals management. Of that 70%, approximately 90% was from royalty payments from one company's mining operation. Minerals account for approximately 80% of historic school trust revenues deposited into the Permanent School Fund.

- **Forestry:** From 2013-2022, approximately 25% of annual gross revenue was generated from forestry management activities such as sales of merchantable timber, firewood, and biomass from logging residue.

- **Real Estate:** From 2013-2022, approximately five percent of annual gross revenue came from real estate activities including granting leases, easements and utility licenses on school trust lands. Additional revenue was generated through limited public sales of school trust lands.

Expenses and Management Costs

DNR provided limited historic expense and management cost information to Callan because, while DNR captures and tracks most expenses for some asset classes (particularly forestry), it does not comprehensively capture and track this information for all asset classes or for the portfolio as a whole. Additionally, DNR does not capture and track all school trust land expenses separately and independently from the other land types it manages.

Laws and protocols both limit the types of expenses that can be paid for with school trust land revenues and define how and where revenues should be deposited to fund management costs. Examples include:

- **Minerals:** 20% of school trust land mineral revenues are deposited into a dedicated account, along with revenues from other DNR-managed lands, to fund minerals management activities. This makes it difficult to track the management costs specifically attributable to DNR's minerals management activities on school trust lands.

  DNR uses this dedicated account to cover all sub-surface related minerals management costs, including on school trust lands. However, DNR also leases school trust lands for surface extraction of peat, gravel, and other aggregates. This work cannot be covered using these dedicated funds because surface extraction is not defined as part of mineral mining.

  Forestry: State law restricts the types of forest management costs that can be paid for out of school trust land revenues, and the amount of these dollars is constrained by the level of revenues earned from forestry-related

activities. In general, allowable costs fall into four categories: forest management, forest improvement, forest roads, and administration. The last time costs exceeded revenues was in fiscal year 2013.

By law, DNR must reforest areas where timber has been harvested, including on school trust lands. Recently, state sources like general obligation bonds or other funds have paid for this activity on school trust lands. When such funding is provided by the Legislature, revenues from school trust lands are not used to pay these costs, thereby increasing revenue deposited into the Permanent School Fund.

- **Real Estate:** The Legislature annually appropriates funding from the Permanent School Fund to cover some costs for real estate work on school trust lands. This appropriation does not fully cover expenditures for this work. To manage the funding shortfall, DNR must use other funding sources for certain real estate activities including lease transactions, land title actions, trespass issues, and preparation for land exchanges and sales. Other real estate activities such as operating recreation facilities like campgrounds on school trust lands must also be paid for from other sources. Typically, costs related to these activities are paid for from the state's general fund.

- **Capital Improvements:** DNR cannot use school trust land revenues for capital improvement or reinvestment opportunities. Instead, DNR and OSTL must seek separate appropriations from other funding sources if these activities are to occur. This restricts the ability to make changes to the portfolio and extends the timeframe for capital improvements.

According to the 2018 Minnesota Management and Budget, Management Analysis and Development _Costs for School Trust Lands Management: Current Approaches, Issues, and Potential Alternatives_ report, the general fund, bonding dollars and other funds appropriated by the Legislature activities provide a significant funding subsidy for a wide variety of DNR management activities on school trust lands. Given the diffuse nature of school trust land-related costs across state funds, Callan is not able to determine the true costs of school trust land management activities. It is unclear whether, if all expenses and costs related to school trust land management were allocated from school trust land revenues, there would be sufficient revenue in some asset classes to cover the related costs. Covering that shortfall would likely require changes to the portfolio such as strategically disposing of assets producing limited or no revenue, the continued need for additional funding sources such as seeking legislative appropriations from other funds, or both.

Flow of Funds

The system of school trust land-related accounts and funds is complex, with revenue and expenditures tracked in multiple ways. Some of the complexity is a result of the following factors:

- There are three state funds in which school trust land revenues, earnings, and expenditures are tracked: the Permanent School Fund (PSF), the Natural Resources Fund (NRF), and the School Endowment Fund (SEF).

- In the state's accounting system, there are currently five accounts within the PSF and NRF to track school trust land revenues as well as DNR and OSTL expenditures. These include:

  o Three suspense accounts in the Permanent School Fund to track revenue from timber and real estate activities, as well as expenditures by the DNR and OSTL on mostly forest management activities.

  o The Minerals Management Account (MMA) in the NRF to track revenues and expenditures from mineral leases by the DNR on mostly mineral-related activities.

  o A State Board of Investment (SBI) "sweep" account in the PSF where excess funds from both the suspense accounts and the MMA are deposited and which is swept monthly.

- Money in the accounts is spent under different legislative and statutory authorizations, including direct appropriations by the legislature, statutorily authorized transfers to the general fund for reimbursements of direct appropriations from that fund, and a statutorily guided cost certification process.

- Timing and schedules for appropriations, transfers, certification of costs, and distribution of revenues is different for many of the accounts. For instance, the SBI sweep occurs monthly, distribution of excess revenues from the MMA to the PSF occurs quarterly but is based on a lookback to the previous biennium, and the cost certification process for forest management expenses occurs annually.

- Expenditures from school trust land revenue—or transfers to other accounts to allow for expenditures—occur in the Forest Suspense Account (FSA) and the MMA.

- On the forest management side, expenditures are based on the DNR's allowable costs for management of trust forest land, based on the Forestry Cost Certification process; on the minerals side, expenditures are based on a direct appropriation by the Legislature.

- Additional one-time and ongoing direct appropriations by the Legislature from the General Fund, the FSA, and the MMA to the DNR and OSTL allow for further expenditures of STL revenues on STL-related activities.

A number of studies have addressed how school trust land revenues, expenses, and management costs are tracked, allocated, and accounted for. They also provided recommendations to improve cash flow processes. These studies include:

- Minnesota Management and Budget, Management Analysis and Development, *School Trust Lands Funds and Accounts*, October 2018;

- Minnesota Management and Budget, Management Analysis and Development, *Costs for School Trust Lands Management: Current Approaches, Issues, and Potential Alternatives*, October 2018; and

- Minnesota Department of Natural Resources, Operation Services Division, Internal Audit Section, *Internal Audit Closure Report School Trust Fund Risk Assessment*, April 2014

Figure 4. Flow chart of school trust lands revenue through funds and accounts, based on state law [24]
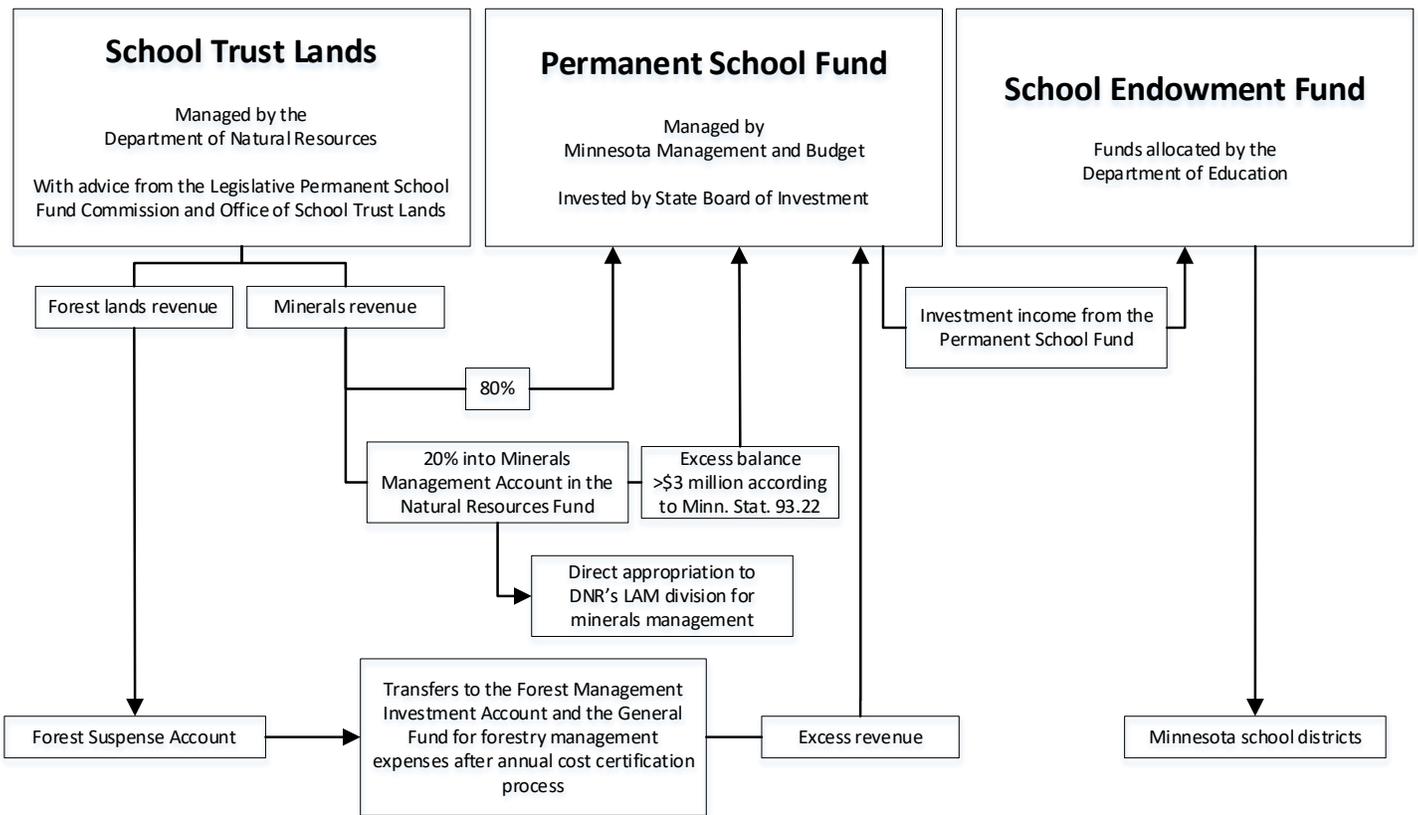
Performance Reporting and Valuation

Asset management plans are developed to, among other things, direct asset financial growth. Historic and current information on asset values and performance is essential for establishing appropriate rates of return against which to measure the performance of the assets. Past performance data, in turn, may help predict future performance. More importantly, this data serves as a starting point for fiduciaries to plan actions that will affect future financial performance.

Performance measurement fulfills a number of portfolio management functions, including:

- Measuring success in fulfilling fiduciary duties and meeting statutory goals.
- Monitoring management costs.
- Demonstrating profitability/loss of each asset class and asset type and the portfolio as a whole.
- Allowing comparison of performance across asset classes and asset types, to benchmarks, and to peers.
- Measuring progress against asset class business plan objectives.
- Using as inputs in "what if" modeling. For example, performance measurement data can be used in the consideration of new asset types to show the impact on the portfolio of shifting from lower-producing to higher-producing asset types, or vice versa.

Portfolio managers use a variety of performance measures to assess the performance of individual assets, asset classes, and overall asset portfolios. Performance metrics provide a framework to track the performance of the portfolio and allow

---

[24] Figure 3 is based on information in the Minnesota Management and Budget, Management Analysis and Development, *School Trust Lands Funds and Accounts* report (2018).

management activities to be measured a variety of ways. No universal performance indicator is available that can comprehensively evaluate the type of diverse portfolio represented by Minnesota's school trust lands. Instead, a variety of measures and targets could be used to get a complete performance picture since any individual performance measure has benefits, drawbacks, and trade-offs.

Up to now, DNR has not produced or utilized a comprehensive set of performance measures to assess management outcomes for all school trust land asset classes. Without such measures, it is difficult to assess the efficiency and effectiveness of school trust lands management. To assess the extent to which DNR is meeting the statutory goal of the Permanent School Fund, Callan recommends utilizing two sets of measures. One would measure financial performance, and the second would measure how successfully "sound natural resource conservation and management principles" are being implemented. Each set of measures is discussed below.

Financial Performance Measures

Historic revenue, expense, and management cost data are the building blocks to measure financial performance. Without this information, it is not possible to develop and utilize the following basic set of performance measures. The data needs to be for school trust lands management only, disaggregated from financial data for the multiple land types managed by DNR.

Callan recommends DNR and OSTL use the following financial performance measures as an initial means for measuring school trust lands financial performance. Depending on the metric, they evaluate the overall portfolio, the set of three primary asset classes (minerals, forestry, and real estate), or both. Reporting would include an analysis and qualitative discussion of the factors impacting performance for each metric.

- **Gross Revenue:** Gross Revenue refers to all income generated from management activities before any expenses or costs are deducted. To develop a benchmark, Gross Revenue should be reported by individual asset class and for the entire portfolio per year for the preceding ten years.

- **Net Profit and Net Profit Margin:** Net Profit is the amount earned after subtracting expenses and costs from gross revenue. Net Profit Margin refers to the ratio of revenue remaining after all expenses and costs have been deducted, divided by gross revenue. Net Profit Margin is the percentage of gross revenue that represents profit. To develop a benchmark, Net Profit and Net Profit Margin should be reported by individual asset class and for the entire portfolio per year for the preceding ten years.

- **Total Real Estate Value:** Total Real Estate Value is the current market value of school trust lands, as calculated by county assessors or through parcel-specific real estate appraisals. The economic value of natural resource assets existing on a school trust parcel such as standing timber, construction aggregate or mineral deposits is not included in this financial measure. Total Real Estate Value serves as a benchmark to measure Land Value Appreciation over time.

- **Land Value Appreciation:** Land Value Appreciation (LVA), expressed as a percentage, measures the change in land value over a specific time period. It requires periodic re-appraisal or calculation of land value, as well as a solid benchmark.

Sound Natural Resource Conservation and Management Performance Measures

The Permanent School Fund's statutory goal is "to maximize the long-term economic return from the school trust lands… with sound natural resource and conservation principles and other specific policy provided in law." While standardized financial performance measures are available to measure the economic performance of school trust lands, there are not corresponding measures to evaluate progress toward the sound natural resource and conservation principles element of

the goal. DNR's Management of School Trust Lands policy provides a potential foundation or framework for developing metrics for this element. The policy explains how DNR defines sound natural resource conservation and management. This definition could be used to develop performance measures based on its three components: implementing all state and federal law on school trust lands, using widely vetted best management practices on school trust lands, and implementing guidelines to consider ecological benefits that are in the best interest of the trust.

Relevant metrics could measure the extent to which DNR meets state and federal environmental laws, implements defined best management practices, and follows guidelines to consider ecological benefits that are in the best interest of the trust. These performance measures could be tailored for a particular asset class or apply across multiple asset classes. Reporting would include appropriate historic data for each performance measure, together with an analysis and qualitative discussion of the factors impacting performance for each metric. Callan recommends DNR and OSTL develop and implement such performance measures.

Land Classification System

An asset management plan typically includes a classification system based on the current source of revenue generated on a land parcel or group of parcels. Understanding current economic activity allows land holdings to be aggregated into broad categories, thereby facilitating more robust management. The purpose of this classification system is to provide asset managers an understanding of the current status of the assets within a portfolio and should not be confused with other types of classification such as a highest and best use analysis (HBU), which evaluates potential future revenue.

Once the lands are classified they are then categorized using the Parcel Ranking System described below. Asset managers can then make tactical decisions about individual assets and the overall portfolio via asset class business plans. The asset class business plans discussed below are the tool asset managers use to set future management goals, address longer-term portfolio risks and opportunities and prescribe specific implementation actions particular to each asset class or asset type.

Asset classes and asset types that currently exist in the portfolio are the starting point for establishing classifications. An asset class is a group of assets with similar exposure to the fundamental drivers of the economy. An asset type is a subclass of an asset class. New asset classes or asset types are added per an asset allocation, asset management plan, or by a statutory or regulatory change. The classifications outlined in Table 4 below include current asset types and a number of other common asset types that do not currently exist in the portfolio. They have been included to illustrate where they would be classified should they be incorporated into the portfolio in the future.

Callan recommends classifying school trust lands using the asset classes and asset types outlined below. There may be multiple asset types on a land parcel but for purposes of classification, a parcel (or group of parcels) should be classified according to the revenue source that is expected to be the major revenue source over at least a five to ten-year time period. For example, if there is both timber and aggregate on a parcel and the major source of revenue is from aggregate, the classification would be Minerals, Surface.

Asset classes and asset types should align with generally accepted institutional standards and norms where possible.[25] For this portfolio, however, instead of establishing a "commodity" asset class with minerals as a subclass, Callan recommends retaining minerals as its own asset class given its dominance in the portfolio. Callan also recommends a Stewardship asset class since some school trust lands are actively managed for conservation purposes.

---

[25] See e.g. *What are real assets?* https://www.nuveen.com/en-us/insights/income-oriented-investing/get-real-with-income-producing-real-assets; *Asset Classes: List, Characteristics, Asset Allocation*, https://www.macroption.com/asset-classes/.

If there is no revenue currently generated from a parcel, then the asset classification and asset type would be determined according to land attributes (e.g. potential to host mineral deposits, significant potential for aggregate resources, or a timber stand not yet at its economic rotation age). An existing parcel's classification may change over time as its use and revenue-generating potential changes or for other reasons. Generally, the classifications should not change frequently. Unless otherwise prohibited by law, this classification system would not preclude the ability to access parcels for activities such as mineral exploration.

The classification system is not an exact science, and, in some cases, those responsible for this work will need to use their best judgement to classify parcels. In those instances, Callan recommends documenting the rationale behind the decision. There will invariably be refinements as the system is implemented. Callan does not predict how any specific school trust land parcel would be classified under this system. That determination can only be made by undertaking the work described above.

Table 4. Asset Classes and Asset Types

Asset Class[26]	Asset Type[27]	Individual Assets
Minerals	*Subsurface*	Ferrous minerals (iron ore, taconite, etc.). Non-ferrous minerals (copper, nickel, gold, platinum, titanium, zinc, manganese, etc.). Industrial minerals (kaolin clay, dimension stone, silica sand, olivine etc.). Stockpiled iron ore (stockpiles containing iron-bearing materials). Auxiliary mine lands. Mining-related infrastructure (buildings, railroads, facilities, etc.).
	Surface	Construction aggregate (sand, gravel, crushed stone, landscape rock etc.). Peat. Marl. Surface soils. Stockpiled materials (other than stockpiled iron ore).
Forestlands	*Timber*	Merchantable timber and regenerating stands.
	Other forest products	Firewood, decorative products. Biomass from logging residue and brush land.
Real Estate	*Industrial*	Manufacturing, warehouse space, logistics, flex.
	Office	Office space.
	Retail	Freestanding retail.
	Residential	Single family, lakeshore cottages, hunting cabins.
	Commercial Recreation	Marinas, campgrounds, OHV parks, shooting ranges, designated trailheads, environmental learning centers, privately managed motorized and non-motorized trails, other recreation.

---

[26] An asset class is a group of assets with similar exposure to the fundamental drivers of the economy.
[27] An asset type is a subclass of an asset class.

Asset Class[26]	Asset Type[27]	Individual Assets
	Public Recreation	Water access sites and fishing piers, parcels necessary to maintain connectivity in recreational systems and designated trails, publicly managed motorized and non-motorized trails, publicly owned and managed campgrounds, OHV parks, shooting ranges, designated trailheads, or other recreational facilities, and wildlife management areas.
Infrastructure	*Renewable Energy*	Solar, hydrologic, wind, geothermal.
	Utilities	Pipelines and transmission rights-of-way, electric, water, wastewater treatment, irrigation, sanitary landfills, community septic.
	Communications	Fiber and satellite networks, wireless communication facilities/towers, radio and television broadcast towers.
Farmland	*Annual Crops (Row Crops)*	Land with crops that require annual replanting. Examples include cultivated wild rice, corn, soybeans, wheat, cotton, potatoes, carrots, and sugar beets. Includes associated infrastructure.
	Permanent Crops	Land with plants that last for multiple seasons and do not require replanting after harvest. Examples include tree nuts, vineyards (wine grapes), orchards (apples, cherries, citrus) and hay lands. Includes associated infrastructure.
	Grazing	Land used for grazing.
Ecosystem Services	*Carbon offset markets*	Land managed to capture carbon from the atmosphere and store it in trees, soil, or peat, specifically to allow for the sale of credits to companies that seek to reduce their carbon footprint.
	Wetland and stream mitigation	Wetlands or streams that are restored, created or enhanced, specifically to allow for the sale of credits to mitigate impacts to wetlands at another location.
	Species and habitat mitigation	Land managed as habitat for endangered, threatened or candidate species, specifically to allow for the sale of credits to mitigate impacts to those species in other locations.
Stewardship	*Conservation*	Land managed for stewardship purposes in compliance with state and federal law (e.g. lands identified for protection under the federal Endangered Species Act or the state Peatland Protection Act).
		Land managed for ecological benefits when it is in the long-term best interests of the trust.
		Land managed for historic and cultural preservation purposes in compliance with state and federal law (e.g. state historic and cultural preservation laws and the National Historic Preservation Act).

Parcel Ranking System

Within each asset class, school trust lands should be categorized using a ranking system. Callan recommends a three-tiered structure, with management priority given to the lands that have the greatest potential to generate net revenues and create or maintain value over a long-term time horizon. Establishing a three-tiered structure provides direction for effective asset management. Typically, it helps trustees prioritize which lands to hold, which to sell, and how best to manage them.

It is also a tool to help focus both human and financial resources. The purpose of a parcel ranking system is to increase management efficiencies and ultimately long-term net revenues attributable to each asset class and asset type.

Callan suggests ranking school trust land parcels into three categories: Highly Productive, Productive, and Least Productive. The purpose is to identify parcels with maximum, medium, and limited or no revenue-generating potential based on certain characteristics of the parcels. The ranking system focuses on net revenues and factors in the management and capital costs of generating the revenue, along with the characteristics of the revenue (e.g. variability and durability), impediments to generating the revenue, and the timeframe for realizing the revenue and value. This work combines revenue potential with risk assessment.

Callan does not predict how any specific school trust land parcel would be ranked under this system, nor how the presence of any specific asset class on a parcel, like minerals, would impact the parcel ranking. That determination can only be made by undertaking the work described above.

Descriptions of the three tiers are as follows:

- **Highly Productive:** The Highly Productive tier applies to lands that provide the highest opportunity and potential for generating net revenues (revenue after all expenses, including management costs, are deducted). The amount and the stability of the income stream is important. Highly Productive land is characterized by the presence of known economic resources, is efficient to manage or requires little management oversight, and provides excellent opportunities for cost-effective management strategies that will generate ongoing revenue. Highly Productive lands form the basis of the revenue stream and should be long-term holds in the portfolio.

- **Productive:** The Productive tier applies to lands that provide opportunity for generating net revenues but may need additional management activity or improvement projects to increase revenue generation. The certainty of the revenue stream is lower than lands in the Highly Productive tier. In other words, there is more variability in the revenue stream. With management and capital, some Productive lands may become Highly Productive lands over time. For example, land with minerals that could potentially be extracted based on DNR mineral potential surveys might fall in this category. This land is currently in the Productive category because it provides opportunity but needs something to happen (e.g. additional improvements, management activity, market event, or technological advancement) for net revenue to be able to be produced or increased, thus moving it into the Highly Productive category.

- **Least Productive:** The Least Productive tier applies to lands that provide limited opportunity for generating net revenue due to management or other constraints, capital and management costs, and/or risks that may not make them an appropriate holding for the portfolio. Least Productive land has conditions or features that require additional oversight and management costs and provide little to no opportunity to generate net revenue. It may be desirable to retain some of these lands if they provide access to other landlocked school trust parcels or for other administrative purposes. They may also be considered for disposition using the currently available mechanisms, namely through exchange or sale at public auction.

The specific criteria for placing parcels into categories will differ according to the asset class and asset type. The basic ranking categories may include asset type, parcel type/size, resource, access/location, and management control.

This undertaking would complement and extend the highest and best use (HBU) analysis completed by DNR in 2013, which used classifications that included both lands that currently generate revenue and those that could potentially generate revenue in the future. At a glance, it appears that much of the land cataloged in the HBU analysis would fall into the Productive category, as it would require management or improvements to produce revenue. Two examples illustrate this assertion:

- The HBU analysis identified 834,626 acres of school trust lands with highest and best use as productive forestlands. Some of these lands were currently producing revenue, while others had the essential characteristics to yield a marketable forest product even though they were not currently producing revenue.

- The analysis identified 1,021,823 acres with a highest and best use as mineral estate lands. This included lands with existing and terminated state mineral leases, historical mineral exploration data, and lands that had minerals that could potentially be extracted based on DNR mineral potential surveys.

Asset Class Business Plans

While an asset management plan provides an overarching framework for managing assets, asset class business plans set forth the tactics and link on-the-ground operational management decisions with the objectives outlined in the asset management plan. In this way, management activities are consistent with and contributing to the overall management goals outlined in the asset management plan. Additionally, they are a tool to monitor management activities, and a mechanism used to document the processes used to derive management decisions. In essence, asset class business plans implement the asset management plan, as they provide specific implementation actions to be actively pursued over their lifespan.

Asset class business plans provide a comprehensive analysis of all aspects of an asset class relevant to its viability, including its history, management, competitive position, market, activities, products, policies, and historic and projected financial performance. Asset class business plans typically include the following information:

- An executive summary of the plan for the asset class.

- An analysis of the market and operating environment, including identification and analysis of new markets and trends opening up opportunities for school trust lands.

- A description of current and future influences on plan implementation and performance.

- An analysis of past and present return on asset performance, current asset value, current asset characteristics, and future expected returns.

- Long-term financial and land management objectives for the asset class.

- Opportunities and challenges facing the asset class and asset types within the asset class and plans for capitalizing on opportunities and confronting challenges, including an analysis of climate change-related risks and opportunities.

- A stated revision timeline for the plan.

Asset class business plans would provide DNR staff guidance to manage school trust land assets to ensure that current and future activities continue to be consistent with the statutory goal of the Permanent School Fund. They are intended to be dynamic living documents and are normally developed every five years and updated annually to report progress and either affirm the current direction or recommend course changes.

Asset class business plans should be developed for each asset class in the portfolio and cover each asset type within the asset class where revenue is currently being generated, informed by any existing DNR management plans that include school trust lands. Based on current activity, this would include minerals (both surface and subsurface), forestry, and real estate asset types. Appendix A provides a framework for the plans. Callan developed this outline based on an analysis of Minnesota law and DNR policy related to school trust land management, a review of asset class business plans from other land trusts, and those completed by other fiduciaries.

Situational Analysis

Callan completed a situational analysis of the strengths, opportunities, challenges, constraints, and risks related to the school trust lands portfolio. It discusses some aspects of how the lands are currently managed as well as how they could be managed differently in the future to better achieve the management goals described above. It also informs the recommendations that follow.

Strengths and Opportunities

Strengths and opportunities represent management strategies that advantage (or have the potential to advantage) school trust beneficiaries, as well as inherent qualities of the school trust lands portfolio that can be developed to increase net revenues to the Permanent School Fund.

- Managing multiple state-owned land types together creates efficiencies. According to DNR, this model:
  - Reduces certifiable costs for school trust lands.
    - Twenty percent of all school trust land timber sales include timber from other DNR-managed land types. These combined sales reduce costs related to timber appraisal, scaling and permit supervision.
    - One-third of DNR's forest road system (in miles) is on school trust lands. Coordinating construction and maintenance across all ownerships reduces the costs of these activities.
  - Allows the state to strengthen its bargaining position. This is similar to collective bargaining, where gains are realized collectively rather than individually. If managed separately, the state risks its competitive position in setting royalty and lease rates for the different land classes. Other state lands could undercut school trust land rates (or vice versa). Furthermore, there may be duplicative management activities resulting in combined overall higher management costs.
  - Is attractive to lessees by offering large, contiguous parcels of public land to be leased together.
- Known mineral resources from geologic formations found in the Duluth Complex, Tamarack region, and Mesabi Range could generate significant future mineral lease fees and royalty revenue for the Permanent School Fund.
- Advancements in mineral exploration and development technologies could improve the ability to detect and potentially develop currently unrecognized mineral deposits.
- Advancements in mineral processing technology could allow marginal mineral resources to be developed with fewer negative environmental impacts.
- Advancements in forest inventory systems through development and deployment of NextGen and LiDAR inventory processes could reduce forest inventory costs, improve accuracy of timber assets, improve sustainable forest management practices and create a single system that will inform all forest management activities such as silviculture, timber appraisals and inventory.
- Online public land sale auctions could allow for the sale of school trust lands to reach a much wider scope of prospective buyers and would likely increase sale proceeds deposited into the Permanent School Fund.
- Ecosystem services markets such as carbon sequestration, wetland or stream mitigation, and conservation banks for species and habitats have the potential to yield substantial ecological benefits while generating revenue on currently unproductive or minimally productive school trust lands.

Challenges

Challenges represent issues that influence trustees' abilities to optimize the school trust lands portfolio that OSTL and DNR have some control over and could address through outreach and engagement.

- The public is largely unaware of the legal and fiduciary obligations that direct DNR's management of school trust lands. At times, this constrains DNR management activities. For example, landowners have raised concerns regarding forest management activities near recreational trails, and surface landowners have objected to the state's leasing of school trust severed mineral interests.

- There are diverse perspectives regarding school trust lands management within DNR, between DNR and OSTL, amongst other units of government including tribal nations and local governments, and amongst stakeholders. Some groups give precedence to revenue generation, some to natural resource preservation, and others to public recreation.

- Revenues generated from school trust lands cannot be used to pay for legal services, requiring DNR to find other funding sources to defend school trust land property rights.

- Trespasses are an ongoing issue that must continually be resolved in order to maintain access and control of school trust lands. They are difficult and time consuming to rectify, increasing management costs such as transactional costs to resolve the trespass, thus reducing net revenues deposited into the Permanent School Fund.

- State lawmakers occasionally pass legislation and enact laws that unintentionally impede DNR's ability to maximize long-term revenue generation.

- School trust revenues cannot be used for capital improvement or reinvestment opportunities because most revenue must be deposited into the Permanent School Fund. Instead, DNR and OSTL must seek separate appropriations from other funding sources if these activities are to occur. This restricts the ability to make changes to the portfolio, adds uncertainty regarding funding (particularly in times of constrained state budgets), and extends the timeframe for capital improvements.

- The combination of statutory, staffing, and funding constraints limits DNR's ability to improve and reposition the school trust land holdings to increase revenue generation.

- Transactional complexities, transactional costs, and DNR's staffing capacity to complete transactions hinder proposed sales and exchanges of school trust lands.

Constraints

Constraints represent issues that OSTL and DNR largely do not control but influence trustees' abilities to optimize the school trust lands portfolio.

- The dispersed pattern of school trust lands often limits revenue opportunities, increases operating costs, and discourages real estate transactions (although it can be favorable for mineral leasing).

- Nearly one million acres of school trust lands are currently economically unproductive because they are low-lying, wet and inaccessible, and therefore have little to no marketability without developing new asset classes such as ecosystem services markets.

- Thousands of acres of school trust lands are landlocked with no legal access, significantly impeding opportunities to generate revenue.

- Controversy related to mining and mining-related issues complicates the state's ability to access, explore for, and potentially develop the state's mineral interests including school trust severed mineral rights.

Risks

Risks represent items that, if left unaddressed, threaten OSTL's and DNR's future ability to optimize the school trust lands portfolio.

Management risks

- DNR manages multiple land types with different legal purposes (e.g. school trust, university trust, consolidated conservation lands, and state-acquired land). This commingled management model makes it difficult to accurately allocate revenue and expenses across the various land types.

  - Minnesota's model differs from most other states, who place management responsibility in an agency or board whose sole focus is trust land management. In these cases, agencies have dedicated fiscal staff who exclusively budget and track trust lands revenues and expenditures.

- A number of statutory management goals have no identified targets or numbers-based objectives.

  - For example, there is no methodology or process (such as an asset allocation study) for credibly modeling and developing targets to "maximize long-term economic return" from school trust lands.

  - Similarly, there is no identified objective regarding how to "manage efficiently and in a manner that reduces management expenditures." As discussed and analyzed in the Revenues and Expenses section above, DNR cannot determine its expenses and management costs for some asset classes because they are not comprehensively tracked and attributed to school trust lands.

  - Additionally, there is no process to determine what degree of revenue diversification is optimal, how it will be achieved and over what timeframe.

- There are no risk tolerance management objectives for the school trust land real property portfolio.

  - Neither the statutory goal for the Permanent School Fund nor DNR policy provide guidance about the level of acceptable risk to satisfy the legal requirement to secure maximum long-term economic return from school trust lands.

Portfolio Risks

- There is no strategic asset allocation for the school trust lands portfolio. Asset allocation is the process of determining the optimal allocation of a portfolio among broad asset classes based upon, among other factors, management goals, risk tolerance, time horizon, liquidity needs, market expectations, and liability characteristics.

  - Without an asset allocation, there are no targeted allocations by asset class and associated ranges, expected returns, or risks to guide future management.

- Annual gross revenue can vary significantly based on market-driven price fluctuations for minerals and timber. Consequently, annual net revenue could vary year-over-year based on commodity markets and as the cost to manage mineral and timber assets remains flat or continues to rise.

  - Global conditions affect the demand for domestic iron ore, and domestic markets are driven by the mix of ore ownership that is being mined at any given time.

  - Minnesota's forest products industry is prone to supply and demand cycles, and timber revenue margins are extremely narrow due to a timber resource that is predominantly low-value pulpwood.

- Revenues are volatile due to concentration.

- In the last ten years, 70% of annual gross revenue has been generated from mineral leasing and royalties, with 90% of that total coming from one company's mining operation. Trustees have not defined an acceptable level of risk tolerance (i.e. an acceptable variation in revenue) so it is unclear whether this volatility is acceptable.

- State law encourages diversification of the minerals economy.[28] However, it has been more than a decade since DNR received a specific appropriation for mineral diversification work, and the last non-ferrous lease sale occurred in 2017. A state-produced minerals diversification plan that addresses mineral leasing procedures, promotion efforts, and state-funded research to advance mineral potential may increase the potential for future revenue-generating activities.

- Uncertainty regarding bonding money for reforestation impacts Forest Management Investment Account costs.

  - State law requires reforestation on DNR-managed forestlands, including school trust lands. [29] The Minnesota Legislature typically issues bonds to pay for reforestation following timber harvests. Occasionally, however, the Legislature has instead appropriated funds for DNR reforestation costs out of the Forest Management Investment Account, dramatically increasing the reforestation costs that DNR charges against school trust land revenues.

- The Legislature may continue to not appropriate funding to compensate the Permanent School Fund for designations or policy provisions on school trust lands that prohibit long-term revenue generation.

  - Under state law, the Permanent School Fund was to be compensated by July 1, 2018 for all school trust lands included under a designation or policy provision that prohibits long-term economic return.[30] The DNR FY2012-13 Biennial Report identified these lands, estimated the compensation due to the fund between $50 and $100 million, and proposed alternative ways to compensate it.

  - A subsequent 2016 DNR School Trust Lands Valuation Report refined the valuation for old growth forests at $19 million, and analyzed the acreages under other prohibitive policies and designations without specifying a value for the other "stewardship" lands.

  - The Minnesota Office of Legislative Auditor stated in its 2020 School Trust Lands Management & Oversight Report that "the legislature has a legal and fiduciary obligation to compensate the Permanent School Fund for school trust lands that cannot produce revenue."

- The effects of climate change are impacting both the ecological functions and economic potential on school trust lands. An increase in invasive species, warmer and wetter winters, and prolonged periods of drought are but a few examples of Minnesota's changing climate. While there may be opportunities that will result from these impacts such as participating in ecosystems services markets, the timeframe and extent to which climate change will negatively or positively impact existing asset classes, like forestry and minerals, is unclear at this time.

  - The asset class business planning process should include an evaluation of climate change risks and opportunities so that they are understood and explicitly considered when managing the existing portfolio as well as when considering new opportunities, such as those that are rapidly expanding in scale and viability from a decarbonizing economy.

---

[28] Minn. Stat. sec. 93.001 "It is the policy of the state to provide for the diversification of the state's mineral economy through long-term support of mineral exploration, evaluation, environmental research, development, production, and commercialization."
[29] Minn. Stat. sec. 89.002 subd. 2(b).
[30] Minn. Stat. sec. 84.027 subd. 18(b).

o This analysis is already underway. For example, a December 2021 report by Dovetail Partners showed that Minnesota's school trust lands have the prospect to substantially increase forest carbon sequestration and potentially provide forest carbon revenue for the Permanent School Fund. The authors noted that "this project charts a course for scalability throughout Minnesota and on forested state trust lands across the United States by assessing and piloting affordable and accessible mechanisms to enter the carbon market." The report also includes an assessment of ecosystem services opportunities beyond carbon sequestration that could provide the mutual benefits of revenue generation and resource stewardship.

Recommendations

Callan offers five priority recommendations that are fundamental for DNR and OSTL to be able to discharge their legal obligations and fiduciary duties and achieve their statutory management goals and requirements. Callan also offers three supporting recommendations that fiduciaries typically utilize as best management practices and that are necessary to complete this asset management plan. Callan advises DNR and OSTL to focus on the priority recommendations first while recognizing that the supporting recommendations will also need to be addressed to complete the asset management plan.

Priority Recommendations

Priority #1: *Fully identify, routinely compile, and consistently track all revenues, expenses, management costs, and appropriations for school trust lands management in total and for the three primary asset classes in the portfolio (minerals, forestry, and real estate). To accomplish this, OSTL and DNR should develop a full cost accounting or allocation methodology and system to measure the complete and accurate costs of managing school trust lands.*

- Currently there is no way to comprehensively evaluate the financial position and the profitability of school trust lands because, while most revenues are tracked and attributed to school trust lands, many expenses and management costs are not. This is critical and fundamental information that forms the foundation for prudent management of the portfolio.

- Once this information is available, OSTL and DNR can make meaningful and informed plans and prioritize management efforts (either of time or money) such as forecasting expected net revenues from proposed activities or identifying which lands to retain and which to consider for divestment. They also will be able to report accurate and credible financial information to trust beneficiaries, the Legislative Permanent School Fund Commission and stakeholders.

- Additionally, DNR will be able to determine whether it is achieving all of its management goals under law, including "managing school trust lands efficiently"[31] and "reducing school trust land management expenditures."[32]

- DNR manages lands for multiple purposes and, as such, some accounts commingle trust revenues with revenues from other land types before depositing school trust revenues into the Permanent School Fund. Despite this management structure, DNR and OSTL should move forward to develop a system or process for identifying and segregating school trust lands financial data.

- This recommendation is consistent with one DNR made in its *Minnesota's School Trust Lands FY16-17 Biennial Report*. It stated DNR and OSTL should coordinate to develop a joint recommendation on developing a full cost accounting system within the DNR designed to measure the complete, true costs of school trust administration and management activities.

---

[31] Minn. Stat. sec. 84.027 subd.18(a)(1).
[32] Minn. Stat. sec. 84.027 subd. 18(a)(2).

Priority #2: *Develop and operationalize a comprehensive Performance Measurement System to measure success in fulfilling fiduciary duties and meeting statutory goals, monitoring management costs, and demonstrating profitability/loss of the portfolio as a whole and of each asset class and asset type.*

- This is a critical starting point for fiduciaries to plan actions that will affect future financial performance and ensure accountability to trust beneficiaries. More information about developing such a framework is included in the Performance Reporting and Valuation section above.

- This recommendation is consistent with one made in the 2018 Minnesota Management and Budget, Management Analysis and Development *Costs for School Trust Lands Management: Current Approaches, Issues, and Potential Alternatives* report. It stated DNR should present more performance measures focusing on the goal of maximizing economic returns in the context of sound natural resource conservation and management principles.

- Likewise, the Office of the Legislative Auditor (OLA) in its May 2020 *School Trust Land Management and Oversight, Special Review* report recommended that DNR and OSTL should "develop a comprehensive set of measures to help assess the management of school trust lands and the revenue they generate."

- In addition, DNR and OSTL should develop "sound natural resource and conservation management principles" performance measures to ensure DNR is meeting the statutory goal of the Permanent School Fund. DNR's revised Management of School Trust Lands policy provides a useful framework for establishing these performance measures but requires further work to flesh out and clarify how the guidelines framework will be operationalized for management purposes.

- The financial components of this recommendation cannot be realized without first implementing Priority Recommendation #1.

Priority #3: *Increase net proceeds deposited into the Permanent School Fund by strategically diversifying school trust land revenue sources both within existing asset classes and by developing new asset classes.*

- Current revenues from mineral royalty payments are generated primarily from one mining operation. Bolstering efforts to support, promote, conduct, or invest in research to support mineral development and actively marketing school trust mineral assets at public auction could aid in the diversification of this asset class, and help diversify the revenue streams from potential mineral development projects.

- Minnesota's timber industry has seen a significant economic downturn over the last decade with the closure of a number of pulp and paper mills. Strengthening support for new timber market opportunities in the areas of biofuels, biochemicals, wood pellet facilities, and mass timber could drive the public/private investment necessary to create new markets, produce additional revenue, and promote continued sustainable management of school trust forestlands.

- Finding innovative solutions to perfect legal access to inaccessible school trust lands offers multiple opportunities for new revenue across all asset classes. All reasonable efforts should be made to secure access to each school trust land parcel.

- A number of school trust land parcels may be able to produce revenue through markets such as carbon trading, wetland banking mitigation and other ecosystem services. These opportunities have tremendous potential to yield substantial benefits to the portfolio. Callan recommends DNR and OSTL expeditiously determine the feasibility of entering carbon and other ecosystem service markets to provide additional revenue streams from school trust lands.

Priority #4: *Adapt the portfolio to address climate change-related risks and opportunities.*

- Climate change effects will continue to impact individual school trust assets and the overall portfolio. OSTL and DNR should assess and actively monitor the potential risks and opportunities associated with climate change, including the ecological impacts as well as the political, regulatory and technological responses to climate change that may affect the growth, productivity, or operability of the assets.

- An analysis of climate change risks and opportunities should be a part of the asset class business planning process so that these risks and opportunities are understood and explicitly considered when managing the existing assets as well as when advancing potential new opportunities, such as those that are rapidly expanding in scale and viability from a decarbonizing economy.

Priority #5: *Increase understanding within DNR on how the agency defines and operationalizes "sound natural resource conservation and management principles."*

- DNR issued a revised Management of School Trust Lands policy in 2019. Among other things, the revised policy outlined three core elements the department uses to define "sound natural resource conservation and management principles" for the various management activities that occur on school trust lands. Discussions with numerous DNR staff across multiple divisions indicate that they remain unclear on how this definition should direct their work.

- A key piece of this revision authorizes the use of management guidelines on specific topics to guide field-based management. DNR has approved only a few of these guidelines and, as such, can't yet assess their effectiveness in clarifying management in the field.

- To help increase understanding, Callan recommends:

  o Expediting guideline development, approval, and implementation.

  o Continuing education efforts to communicate how the policy and related guidelines impact school trust lands management in the field. Increased understanding of the operational definition of "sound natural resource conservation and management principles" will assist in implementing management decisions, reduce intra-agency management conflicts and help guide the future direction of managing the portfolio.

Additional Recommendations

Callan offers three supporting recommendations in addition to the priority recommendations.

Land Classification System

- Classify school trust land parcels into asset classes and asset types that currently exist in the portfolio as the starting point for establishing the land classification system. Include new asset classes or asset types that may be added per this asset management plan, an asset allocation study, or through a statutory or regulatory change.

- Classify school trust land parcels according to the current source of the revenue generated on the land. When there are multiple asset types (i.e. revenue sources) on a land parcel, classify that parcel according to the revenue source that is expected to be the major revenue source over at least a five to seven year time period.

- Use asset classes and asset types that align with generally accepted institutional standards and norms whenever possible.[33] For this portfolio, however, instead of establishing a "Commodity" asset class with minerals as a subclass, we recommend retaining Minerals as its own asset class given its revenue-generating dominance in the portfolio.

---

[33] See e.g. *What are real assets?* https://www.nuveen.com/en-us/insights/income-oriented-investing/get-real-with-income-producing-real-assets; *Asset Classes: List, Characteristics, Asset Allocation*, https://www.macroption.com/asset-classes/.

We also recommend a Stewardship asset class since some school trust lands are managed for conservation purposes as required by law or policy.

Parcel Ranking System

In preparation for developing Asset Class Business Plans, adopt a tiered ranking system to classify parcels into Highly Productive, Productive, and Least Productive categories based on their revenue-generating potential.

- Establish criteria for each asset type.
- Assign parcels into their appropriate category.

Asset Class Business Plans

- Develop Asset Class Business Plans for each asset class in the portfolio and each asset type within the asset class where revenue is currently being generated. Based on current activity, this would include minerals (surface and sub-surface), forestlands, and real estate asset classes.

- Develop the plans every five years and update them annually to report progress and either affirm the direction set forth or recommend course changes. The plans are dynamic living documents.

- Develop the plans using the framework suggested in Appendix A.

Appendix A: Asset Class Business Plan Outline

1. Executive Summary
    a. Purpose and objectives
    b. Major initiatives, tactics, and timeframes
2. Introduction
    a. History and background
    b. Mission and vision statement
    c. Fit and role within the overall trust lands portfolio
    d. Investment objective and risk (volatility) for the Asset Class and each Asset Type
    e. Business plan purpose and need
    f. Revisions/updates and timeframe
    g. Statutory, legal and regulatory framework
3. Description of the asset class
    a. Portfolio composition: Portfolio description using various units – e.g. acres, square feet, type of resource, value, revenue source, and Tier
        i. Diversification by Asset Type and sub class
        ii. Location/Geographical Diversification
        iii. Revenue Diversification
    b. Current asset values, date of valuation, and methodology for derivation of value
    c. Revenue Characteristics
        i. Total revenue by year
        ii. How is income generated
        iii. What are the revenue sources, drivers and trends
        iv. How is "price determined" (e.g. how are lease rates set, how is timber priced and sold?)
        v. Lease structures
        vi. Diversification of income by lessee, location, size
        vii. Existing initiatives for increasing revenue and assessment of effectiveness
        viii. Value-add activities for additional revenue streams and long-term resource benefits
4. Management Structure and Costs
    a. Who is managing the assets and how much does it cost?
    b. What are the internal resources used to manage the assets?
    c. The Governor and Legislature
        i. Number of staff/FTEs, costs, plans for increases/decreases and associated costs
        ii. Infrastructure/equipment, and costs
    d. External service providers
        i. Description, length of contracts, costs
    e. Key partners (e.g. U.S. Forest Service, tribal nations, county and local governments, industry and conservation groups)
5. Non-Management Operating Expenses
    a. Describe and quantify non-management expenses specifically for the Asset Class
    b. General repairs and maintenance, and trends

Callan

      c.   Detail other expenses as needed, and trends

      d.   Capital improvement projects

6.   Financial Performance

      a.   Discussion of financial performance over past year, three years, five years, and ten years

      b.   Net income from past year, five, and ten years

      c.   Income statement with revenues, expenses, and net income for each of past 10 years

      d.   Income, appreciation, and total return, past year, 3 years, 5 years, 10 years.

      e.   Attribution of returns – what drove returns

      f.   Comparison to objectives

7.   Market Analysis

      a.   If the Asset Class contains different asset types then the market analysis needs to be segmented and done separately for each asset type

      b.   Demand - current state of the market, occupancy

      c.   Who are the major customers?

      d.   Existing and new supply – who are the competitors, what is being offered?

      e.   Recent leasing transactions, rates, demand drivers

      f.   Assessment of future demand, net absorption, market occupancy, and rental rate trends

      g.   Sales transactions/comparables

      h.   Assessment of the property's position in the market with regard to the competitive set

      i.   Conclusions

8.   Management Philosophy and Plan

      a.   Guiding principles used in management

      b.   Short and mid-term objectives

          i.   Specific financial objectives

          ii.   Management objectives, including those related to sound natural resource management principles

      c.   Step-by-step detailed management strategies for achieving the objectives including:

          i.   Personnel who are responsible for implementing

          ii.   Specific timeframes

          iii.   Approvals/changes in operating procedures, laws etc. needed

          iv.   Capital budget for achieving objectives

          v.   Key Performance Indicators - outline key performance indicators to match each objective

          vi.   Match Indicator to Management level (e.g. asset class, asset type, asset)

          vii.   Indicator

          viii.   Date for achievement

          ix.   Value

          x.   Current year value

          xi.   Baseline value against which the objective will be measured

      d.   Projections of revenue and expenses for next five years using income statement format and compared to prior five years

      e.   Projections of sales in next five years and prioritizations by year

Callan

9. Program Analysis
    a. Discussion of strengths, challenges, risks, and opportunities for the asset class. These may be generated by the assets, the operating and economic environment, the management (e.g., the way the assets are managed, skills of management, management structure), environmental factors, climate change risks and opportunities, and the legal/regulatory/political environment
10. Appendices
    a. Map with Locations
    b. Framework for Land Classification and Parcel Ranking systems.
    c. Revenue by Type of Asset
    d. Organizational chart illustrating management structure
    e. Glossary of terms
    f. Acronyms

Appendix B: Glossary of Terms

A

Appraisal: An analysis, opinion or conclusion relating to the value, nature, quality, or utility of specified interests in, or aspects of, identified real estate.

Asset Allocation: The implementation of a strategy that attempts to balance risk versus reward by adjusting the percentage of each asset in a portfolio according to, among other factors, management goals, risk tolerance, time horizon, liquidity needs, market expectations, and liability characteristics. The focus is on the characteristics of the overall portfolio.

Asset Class: An asset class is a grouping of similar investments or assets that have a distinguishable risk and return pattern.

Asset Class Business Plan: A plan that sets forth the tactics and link on-the-ground operational management decisions with the objectives outlined in an asset management plan. It provides a comprehensive analysis of all aspects of an asset class relevant to its viability, including its history, management, competitive position, market, activities, products, policies, financial performance and projected performance.

Asset Classification: A system for assigning assets into groups, based on a number of common characteristics.

Asset Management Plan: A plan used to ensure that assets are managed, preserved and protected. These plans define overarching beliefs and philosophy about a set of collective assets and include elements of financial analysis, asset selection (and divestiture), asset allocation (diversification), plan implementation, ongoing monitoring of the assets and potential improvements.

Asset Type: A subclass of an asset class.

B

Beneficiary: A person or entity entitled to the benefit of any trust arrangement.

Bonding (bond funding): The state of Minnesota sells General Obligation Tax Exempt and Taxable Bonds, State General Fund Appropriation Bonds and certain Revenue Bonds. The proceeds from the sale of General Obligation bonds are used to pay the cost of building the capital projects that are approved by the Legislature. All Revenue Bond and State Appropriation Bond programs are authorized by Minnesota statutes to fund specific programs or purposes.

C

Commodity: A basic good, usually a raw product used in commerce, which is interchangeable with other commodities of the same type and is generally traded via futures contracts. Examples include oil, gold, wheat, timber, and iron ore.

Correlation: Correlation measures the degree to which two variables, such as asset classes, move in relation to each other. Correlation is a commonly used tool in asset allocation studies and in portfolio management.

D

Diversification: Diversification seeks to reduce the volatility of a portfolio by investing in a variety of asset classes.

Down Market: The period of time after a market top during which a security's price trends downwards.

Callan

E

Endowment Funds: Funds established for the support of institutions such as colleges, private schools, museums, hospitals, and foundations. The investment income may be used for the operation of the institution and for capital expenditures.

F

Fiduciary: A person who holds a legal or ethical relationship of trust with one or more other. Typically, a fiduciary prudently takes care of money or other assets for another person.

Fiduciary Duty: A legal obligation to act in the best interest of another party. For instance, a trustee has a fiduciary duty to the trust's beneficiaries.

Fiduciary Duty of Care: The duty of care requires the trustee to avoid actions that could be harmful to the beneficiaries.

Fiduciary Duty of Loyalty: The duty of loyalty refers to the obligation of trustees to manage the trust in a way that is in the best interest of the beneficiaries.

Fiduciary Duty to Account: Trustees must keep beneficiaries reasonably informed of the trust and its administration.

Fiduciary Duty to Diversify: The duty of care requires trustees to distribute the risk of loss by a reasonable diversification of assets, unless under the circumstances it is prudent not to do so.

Fiduciary Duty to Make Trust Property Productive: The duty to make the trust property productive means that trustees have an affirmative duty to put the trust property in a position to produce something. Assets have the potential to produce income, appreciation, or both, and growing the assets and generating income is one of the basic requirements for any trustee.

Financial Assets: Highly liquid assets that are either in cash or can be quickly converted to cash. They include investments such as stocks and bonds. The major feature of financial assets is that it has some economic value that is easily realized.

G

Gross Revenue: The sum of all money generated by a business, without taking into account any part of that total that has been or will be used for expenses.

I

Index: Indices are imaginary portfolios of securities that replicate a market or a portion of a market. An appropriate index can be used as a benchmark to evaluate a portfolio manager's performance.

Inflation: A period in which the general level of prices for goods and services is increasing, and, thus, purchasing power is decreasing.

Investment: An asset or item that is purchased with the hope that it will generate income or appreciate in value at some point in the future. An investment always concerns the outlay of some asset today (time, money, effort, etc.) in hopes of a greater payoff in the future than what was originally put in.

L

Land Value Appreciation: Measures the change in land value over a specific time period. It requires periodic re-appraisal or calculation of land value, as well as a solid benchmark.

Liquidity: In general, liquidity refers to the ease by which a financial asset can be converted into cash. Liquidity is often more narrowly defined as the ability to sell an asset quickly without having to make a substantial price concession.

M

Market Value: The market value is the current price of a security or portfolio.

Mineral Royalties: Negotiated payments made to the mineral rights owner by lessees (generally mining companies) for the minerals they remove from the land. The mineral rights owner may also receive payments or lease rental fees from mining companies during the period when the companies are exploring for minerals.

N

Net Income: The amount of revenue left after subtracting all expenses and costs. Also referred to as net profit.

Net Profit Margin: The ratio of revenue remaining after all expenses and costs have been deducted, divided by gross revenue. Net Profit Margin is the percentage of gross revenue that represents profit.

P

Performance Measurement: The development, application, and use of performance measures to assess achievement of performance standards.

Portfolio: A collection of assets.

Price Fluctuation: The fact of prices going up and down.

R

Real Property: Land or other assets that are permanently situated on or under the land. Examples of real property include buildings, crops, minerals, roads, and timber. Real property is also known as real estate.

Risk: The possibility that returns will be greater or less than forecast. Types of risk include inflation risk, political risk, liquidity risk, portfolio risk, etc. Diversification provides some protection against risk.

Risk Tolerance: A certain degree of variability in returns that a portfolio manager feels acceptable to withstand.

S

Specific Risk: Specific risk is the risk attributable to an individual asset class and not related to market movements. This type of risk can be eliminated through diversification.

Split Estate: A condition where the surface owner of real estate does not possess ownership of subsurface commodities such as minerals.

Systematic Risk: Systematic risk is the risk inherent to an entire portfolio rather than an individual asset class. This type of risk cannot be eliminated through diversification. It is also known as "market risk."

T

Timberland: All timber related investments including timber, timber deeds, leases, cutting rights, and associated infrastructure.

Total Return: Total return is a standard measure of performance that includes capital appreciation or depreciation, realized gains and losses, and income.

Trust: A legal relationship in which one party holds property for the benefit of another.

Trustee: A person or entity with a fiduciary responsibility for governing a trust, according to trust law and the rules established by the trust's grantor. For Minnesota's school trust lands, any person acting in an official state capacity who makes school trust-related decisions or recommendations is a trustee.

V

Valuation: An estimation of something's worth, especially one carried out by a professional appraiser.

Volatility: The degree to which an investment's market value goes up and down over time.

Important Information and Disclosures

Information contained in this document may include confidential, trade secret and/or proprietary information of Callan and the client. It is incumbent upon the user to maintain such information in strict confidence. Neither this document nor any specific information contained here in is to be used other than by the intended recipient for its intended purpose.

The content of this document is particular to the client and should not be relied upon by any other individual or entity. There can be no assurance that the performance of any account or investment will be comparable to the performance information presented in this document.

Certain information herein has been compiled by Callan from a variety of sources believed to be reliable but for which Callan has not necessarily verified for accuracy or completeness. Information contained herein may not be current. Callan has no obligation to bring current the information contained herein.

This content of this document may consist of statements of opinion, which are made as of the date they are expressed and are not statements of fact. The opinions expressed herein may change based upon changes in economic, market, financial and political conditions and other factors. Callan has no obligation to bring current the opinions expressed herein.

The statements made herein may include forward-looking statements regarding future results. The forward-looking statements herein: (i) are best estimations consistent with the information available as of the date hereof and (ii) involve known and unknown risks and uncertainties. Actual results may vary, perhaps materially, from the future results projected in this document. Undue reliance should not be placed on forward-looking statements.

Callan disclaims any responsibility for reviewing the risks of individual securities or the compliance/non-compliance of individual security holdings with a client's investment policy guidelines.

This document should not be construed as legal or tax advice on any matter. You should consult with legal and tax advisers before applying any of this information to your particular situation.

Reference to, or inclusion in this document of, any product, service or entity should not necessarily be construed as recommendation, approval, or endorsement or such product, service or entity by Callan.

This document is provided in connection with Callan's consulting services and should not be viewed as an advertisement of Callan, or of the strategies or products discussed or referenced herein.

The issues considered and risks highlighted herein are not comprehensive and other risks may exist that the user of this document may deem material regarding the enclosed information.

Any decision you make on the basis of this document is sole responsibility of the client, as the intended recipient, and it is incumbent upon you to make an independent determination of the suitability and consequences of such a decision.

Callan undertakes no obligation to update the information contained herein except as specifically requested by the client.

Past performance is no guarantee of future results.